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REVIEW OF WHOLESALE MARKET DESIGN	§ §	PUBLIC UTILITY COMMISSION OF TEXAS

Intersect Power appreciates the opportunity to submit these comments in this project to evaluate options to improve the ERCOT market structure. We commend the Commission for its efforts towards and commitment to addressing the reliability issues facing ERCOT and its willingness to make justified improvements to the operations of the market. The Commission should be extremely proud of the broad support demonstrated for ERCOT's energy-only market structure. Intersect Power submits these comments in response to Commission Staff's request for stakeholder input on October 26, 2021.

The following comments represent an Executive Summary style of filing. We have selected to succinctly answer the questions we are most familiar with. If any of the concepts identified herein are of interest to the Commission, we would be pleased to elaborate further.

INTERSECT POWER

Founded in 2016, Intersect Power is a clean energy company bringing innovative and scalable low-carbon solutions to its customers in retail and wholesale energy markets. The company is developing some of the world's largest clean energy resources providing low-carbon electricity, fuels, and related products to customers across North America. Intersect Power has a portfolio of 2.4 GWdc of late-stage solar and storage projects that will be in operation by 2023 as well as an emerging pipeline of 5 GWdc of early-stage clean energy assets, including green hydrogen, with $1.3 B in financial transactions closed. The company has also developed and sold more than 1.7 GWdc of contracted solar projects across California and Texas.

COMMENTS

3. Should ERCOT develop a discrete fuel-specific reliability product for winter? If so, please describe the attributes of such a product, including procurement and verification processes.

- No. ERCOT should avoid using a discrete fuel-specific reliability product in any scenario, because ERCOT already has market-based signals and products intended to incentivize fuel supply for reliability purposes. Adding an out-of-market product would duplicate the incentive provided by selection of an LSE obligation approach.
- It's important to note that the proposal to reduce the HCAP may reduce the incentive for fuel reliability. The Commission's proposal to add out-of-market products, while at the same time proposing to limit in market products, does not make sense.

4. Are there alternatives to a load serving entity (LSE) Obligation that could be used to impose a firming requirement on all generation resources in ERCOT?

- Firming requirements on intermittent resources would not solve reliability issues in ERCOT.
- As of March 2021, there were 24,970 MW of installed wind and 4,117 MW of installed solar capacity in ERCOT. Assuming a 60% firming requirement would result in 12,452 MW of firming capacity. The resulting high, non-recoverable costs would likely have the adverse impact of incentivizing intermittent generators to retire rather than be burdened by the increased capital costs, which are not properly compensated by the market. Retirement of nearly 30GW of intermittent resources would sharply reduce the resiliency and reliability of the ERCOT market and greatly increase costs to consumers.
- ERCOT's market is designed to incentivize the development of new resources when and where they are most needed. Adding a firming requirement undermines this philosophy, because it does not consider the locational needs of the market. Sacrificing the efficiency of the competitive markets in favor of misguided firming requirements is perilous to the ERCOT market design.

6. How can an LSE Obligation be designed to protect against the abuse of market power in the wholesale and retail markets?

- ERCOT is unique in that many of the big retail electric providers are also owners of existing thermal generation in ERCOT. In this case, REPs could prioritize their own resources over others and squeeze out competing resources, including inverter-based capacity, effectively working against the competitive market structure.

- The best way to reduce market power is to ensure the LSE Obligation is designed to attract new resource investment without bias towards a specific technology. This requires designing an ELCC or similar methodology with significant public input to ensure transparency and a fair reflection of the resource type's actual contribution to system reliability. Resources with the ability to control output, e.g., thermal resources or energy storage resources, should have corresponding availability and must offer obligations to remain eligible to fulfill the LSE Obligation.

7. How should an LSE Obligation be accurately and fairly determined for each LSE? What is the appropriate segment of time for each obligation? (Months? Weeks? 24 hour operating day? 12 hour segments? Hourly?)

- LSE Obligation should be assessed on a monthly basis, and the reliability rating of technologies (or ELCC) should be assessed based on the same timeframe to promote an accurate measurement of an LSE's ability to meet peak load.

10. How will an LSE Obligation incent investment in existing and new dispatchable generation?

- Incentivizing investment in ERCOT to preserve and expand the generation resource mix requires certainty in the revenue opportunities available. To date, the energy only structure of the market has incentivized low-cost resources able to earn a return on investment, resulting in a diversity of generating profiles across an equally diverse set of technologies. If the Commission decides to add an LSE obligation with resource payments outside of the energy only market, a new revenue stream will become available that incentivizes availability during periods of peak demand. The generation resources best able to provide service at the lowest cost will be incentivized to expand market share.
- How the LSE obligation is designed will provide an important signal for potential generation investment. The obligation should require the LSE to show it has adequate resources contracted to cover the expected peak demand of each season.
- The tenure of the contract required to fulfill this showing will also help to incentivize investment. In other markets, such as the CAISO, this period is 10 years. Assuming the seasonal peak will grow as new load is added to the system over time, the short nature of the proposed 3-year contract may be compensated by confidence that the resource would be

likely to recontract following the first term. However, increasing the tenure of the contract to 5 years would improve certainty in the revenue and improve the incentive without altering the cost of the resource.

- ELCC assigned to each resource will also affect the potential for new investment. As a solar developer with significant experience in incorporating batteries to create a flexible hybrid project, Intersect Power knows that ELCC values are affected by a variety of inputs. If the ELCC of a hybrid solar+storage project provides adequate generator revenues on top of energy payments, the Commission will see companies like Intersect Power investing in new hybrid solar+storage projects and adding batteries to existing inverter-based resources.
- Battery storage systems are capable of supporting many ancillary services. The addition of new revenue to ensure adequate availability of resources could "open the door" to greater volumes of inverter-based resources with battery storage being able to participate in other ancillary services which by themselves, are not enough to incentivize battery storage.
- While unknown at this time, the reliability characteristics of various resources during extreme weather events could emerge as quantifiable attributes. Intersect Power's experience with battery storage projects shows that they are rated to operate in more extreme weather than gas plants (-30' for battery storage vs. -03' for standard gas turbines/-20' for winterized gas).

16. Are there relevant "lessons learned" from the implementation of an LSE Obligation in the SPP, CAL-ISO, MISO, and Australian markets that could be applied in ERCOT?

- Based on experience in CAISO, Intersect Power has seen first-hand the benefit of LSE Obligations. In CAISO, LSEs are required to procure Resource Adequacy (RA) in 10-year blocks to show an ability to reliably serve load. RA is based on ELCC, and battery storage systems currently receive allocation for 100% of nameplate capacity. This obligation supports the demand side of the RA market, which provides projects the opportunity to secure long-term contracts that are needed for financing and development. ERCOT's program would benefit from mimicking this CAISO attribute because longer tenure and full allocation will support the development of battery storage systems in ERCOT and increase reliability during periods of intermittency.

- One drawback in CAISO is it regularly updates and/or discusses updates related to qualifications, which creates a change in law risk for projects and contracts. ERCOT would benefit from having language in its program that limits the frequency of changes to reduce change in law risk.

Intersect Power thanks the Commission for this ability to provide feedback on the concepts put forward to date. We look forward to continuing to participate as the Commission moves toward reliability reforms of the ERCOT market structure.

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